TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION Effective December 1, 2011
WIN-1486

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **October 2012**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Ultra Magnum Aluminum Clad Wood Double Hung Windows with Double Hung Transom, Non-impact Resistant, manufactured by

Kolbe & Kolbe Millwork Co., Inc.
1323 South Eleventh Avenue
Wausau, WI 54401
(715) 842 - 5666

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The aluminum clad wood double hung windows with double hung transom evaluated in this report are non-impact resistant windows. This product evaluation report is for aluminum clad wood double hung windows with a double hung transom based on the following tested constructions:

General Description:

System	Description	Rating	Hallmark Certification
1	Ultra Magnum Double Hung with Ultra Magnum Transom; Standard Performance	H-LC40 92 x 104 LC-PG40 92x104 - H	413-H-1025.00 413-H-1025.01
2	Ultra Magnum Double Hung with Ultra Magnum Transom; High Performance	H-LC50 92 x 104 LC-PG50 92x104 - H	413-H-1039.00 413-H-1039.01

Product Dimensions (Systems 1 and 2):

Overall Size: 92 1/4" x 104 7/16"

Double Hung Windows:

Double Hung Size	Top Sash Size	Bottom Sash Size	Glass Size (Both Sashes)
46 1/8" x 77 3/16"	41 5/8" x 36 7/8"	41 5/8" x 37 15/16"	37 9/16" x 33 9/16"

Transom:

Transom Size	Transom Sash Size	Transom Glass Size
92 1/4" x 27"	89 15/16" x 26 9/16"	83 11/16" x 20 9/16"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1 and 2	Double Hung: IG-1 Transom: IG-2	GM-1

Note: [1] See the "Glass Construction Key" for the glazing construction.
[2] See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Sealed insulating glass units. The sealed insulating glass units are comprised of two single strength (3/32") annealed glass lites separated by a desiccant-filled stainless steel spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2: Sealed insulating glass units. The sealed insulating glass units are comprised of two double strength (1/8") annealed glass lites separated by a desiccant-filled stainless steel spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are set from the interior against a bead of structural silicone sealant. Along the interior, wood glazing stops are secured with brads spaced 2 inches from the ends and 8 inches on center.

Frame Construction: The frame members consist of pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with fasteners. Interior wood jamb stops are utilized at the head and jambs and are secured with fasteners. **Aluminum Cladding:** The extruded aluminum cladding is applied to the frame head, sill, and side jambs. The aluminum cladding corners are joined with a corner key and secured with fasteners.

Double Hung Sash Construction: The sash members consist of molded pine sections. The sash corners are mortise and tenon construction and are secured with fasteners. **Aluminum Cladding:** Roll formed aluminum cladding is applied to the sash members.

Fixed Transom Sash Construction: The fixed transom sash members consist of molded pine sections. The corners are mortise and tenon construction and are secured with fasteners. The fixed sash is set against the frame from the interior and is sealed and secured with an interior stop that is secured with fasteners. **Aluminum Cladding:** Roll formed aluminum cladding is applied to the sash members.

Vertical Mullion: Formed with the jambs of the two double hung windows. The jambs are fastened together with screws.

Horizontal Mullion: Formed with the heads of the two double hung windows and the sill of the fixed transom. The mullion is reinforced with a ¼" steel mull stiffener. The double hung windows frame head is secured to the transom frame sill with screws.

Hardware:

- Vinyl jamb liners w/ sash balances; Two (2) required; Located in the frame side jambs.
- Metal cam locks with angle screw keepers; Two (2) required; Located in the meeting rail

Product Identification: A certification program label (WDMA Hallmark Certified) will be affixed to the window. The certification label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the following applicable standards: AAMA/WDMA 101/I.S.2/A440-05 and AAMA/WDMA 101/I.S.2/A440-08.

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	92 ¼	104 7/16	± 40
2	92 ¼	104 7/16	± 50

Impact Resistance: These window assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These window assemblies will need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Smaller Assemblies: Windows assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The window assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation drawings are available from the manufacturer.

The windows shall be fastened to minimum Southern Yellow Pine dimension lumber.

Installation:

Horizontal Mullion: The horizontal mullion is secured to the wall framing with a steel anchor plate and an 18 gauge steel anchor clip at each end of the mullion. The anchor plate is interlocked with the mullion stiffeners. The anchor clips are secured to the window side jambs with six (6) No. 8 x ¾" screws and with four (4) No. 8 x 2 ¼" screws. The anchor clips are secured to the wall framing with eight (8) No. 8 x 1 ¼" screws.

Vertical Mullion: The vertical mullion is secured to the wall framing with two (2) Kolbe & Kolbe metal installation (Gemini) clips (1 5/8" x 10 1/16" x 0.04"). The clips are secured to the window frame with two (2) No. 8 x 2 ¼" screws. The clips are secured to the wall framing with two (2) No. 8 x 1 ¾" screws.

Windows:

Option 1: The window assembly is secured to the wall framing using Kolbe & Kolbe metal installation clips (1 5/8" x 10 1/16" x 0.04"). The clips are secured to the window frame with two (2) No. 8 x 3/4" screws. The clips are secured to the wall framing with one (1) No. 8 x 1 3/4" screw. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing.
Transom: Along the side jambs, the fasteners shall be spaced 13 1/2 inches from each corner. Along the head, the fasteners shall be spaced 18 7/16 inches from each corner and on center.
Double Hung: Along the side jambs, the fasteners shall be spaced 15 7/16 inches from each corner and on center.

Option 2: The window assembly is secured to the wall framing using the window frame with minimum No. 10 screws. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing. The spacing of the fasteners is specified in the table below.
Transom: Along the side jambs, the fasteners shall be spaced 13 1/2 inches from each corner. Along the head, the fasteners shall be spaced 18 7/16 inches from each corner and on center.
Double Hung: Along the side jambs, the fasteners shall be spaced 12 7/8 inches from each corner and on center.

Nailing Flange (both options): The perimeter of the window is secured with minimum 12 gauge smooth shank roofing nails spaced 7 inches on center penetrating through the nailing flange. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.